

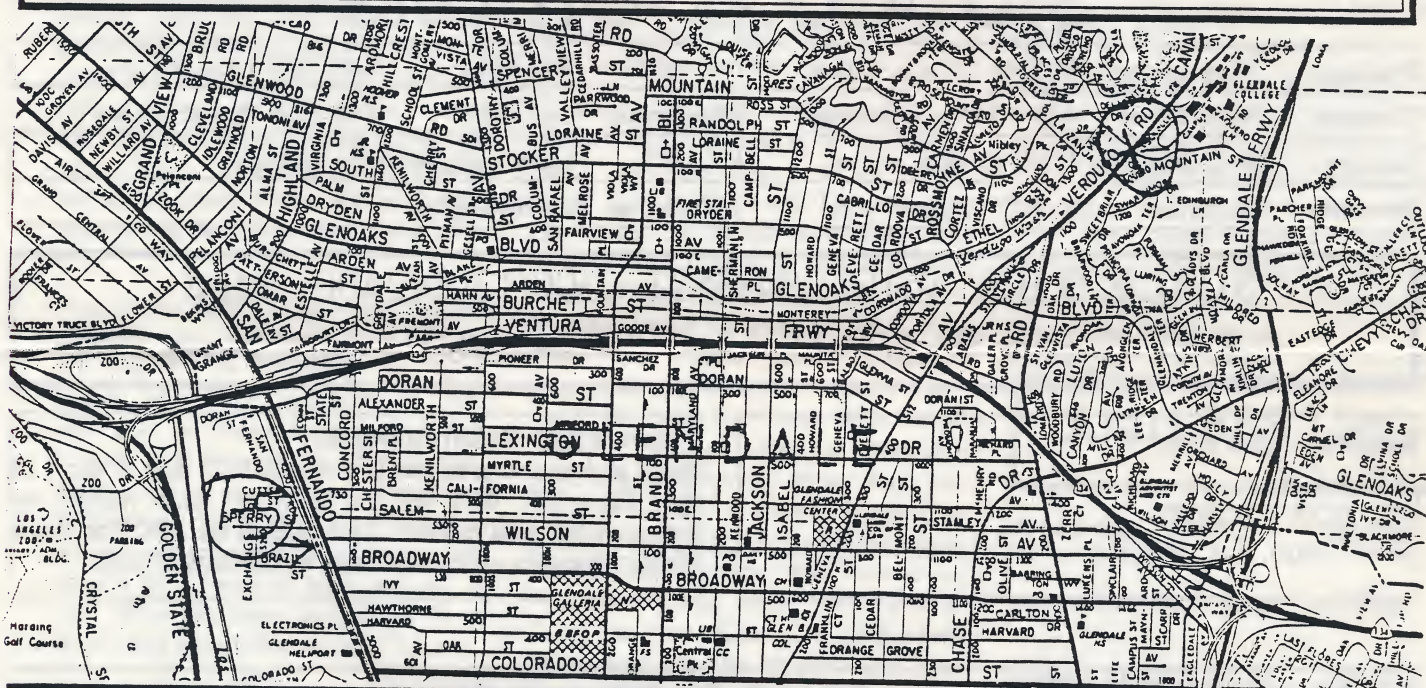


The I/O Connector

September


1988

The Newsletter of the San Diego Atari Computer Enthusiasts



Glendale Atari Faire, Friday the 16th, Saturday the 17th

Hypercard & Hyperclone on the ST

LDW Power Spreadsheet Special  Act Now and SAVE!!!!

SpartaDOS X Cartridge Update-Check It Out

XE to ST Interface that works! (thanks to P.S.A.N.)

Mike Leshner's Multisync Connections-1 monitor does it all

THE SAN DIEGO ATARI COMPUTER ENTHUSIASTS

(S.D.A.C.E.) is an independent, non-profit organization and users group with no connection to Atari Corporation. Membership includes access to the program libraries, subscription to **The I/O Connector**, free want ads, and access to other club activities. Permission to reprint articles from this newsletter in non-commercial form is granted provided original credit is given

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S.D.A.C.E. Officers

President	Mark Lawless 691-7844 (10 a.m.-5 p.m.)	V.P. (8-bit)	Ron Miller 748-7195 (5 p.m.-9 p.m.)
Treasurer	Nancy Rivers 670-6991 (leave message)	Membership	Dick Hiatt 541-7034 (5 p.m.-9 p.m.)
Secretary	David Delgadillo 475-6790 (5p.m.-9 p.m.)	V.P. (ST)	Vacant until December elections
Newsletter	Tom Briant 581-2477 (5 p.m.-9 p.m.)	ST Librarian	Paul Huntington

SDACE B.B.S. (619) 284-3821 300/1200/2400 Baud
XE/ST Sysop: Rick DeHaven 24 hours/60+ megabytes

Mailing Address:

S.D.A.C.E.
PO. BOX 203076
San Diego, CA 92120.

Newsletter Submissions:

Send all text and graphics to the club P.O. Box or Sig 1 of the S.D.A.C.E. BBS by the 30th of each month for inclusion the next month. Text should be ASCII or Word Writer; Graphics should be high-res DEGAS or .IMG.

Yes, sign me up for one year's membership in S.D.A.C.E. This entitles me to receive the monthly club newsletter, use the club libraries, and use of the club B.B.S. Membership dues are \$18 per year. Mail this form and your check to S.D.A.C.E., P.O. 203076, San Diego, CA 92120

Name _____ Computer _____

Address _____

Phone _____

Comments _____

The Pursuit of Happiness by Tom Briant

Hypercard may be 10% Card and 90% Hype; but it separated the star-bellied MacSneeches from us plain bellied ST Sneeches. Well, no more!!! Running a beta version of Spectre 128, Mark Booth impressed the neighboring Mac owners at the San Diego Computer Society Fair by running Hypercard, MacPaint II, and WordPerfect for the Mac on his 1040. Sandra Russ ran her perennially popular 3-D demos with the liquid crystal shutter glasses. Dick Hiatt represented the 8-bit group with several games that people sat down and played. Nothing like hands-on experience with an Atari to blow away past misconceptions. Mike Street and Nancy Rivers worked at the registration booth; and finally, Gloria Rickey donated blood at the San Diego Blood Bank blood drive.

Next on the agenda comes the Southern California Atari Computer Faire Version 3.0, held at the Glendale Civic Auditorium, 1401 North Verdugo Road, Glendale, CA, on Friday, September 16, from 12 noon to 6 p.m., and Saturday, September 17, from 10 a.m. to 5 p.m. Bring your membership card to receive a discount, or arrange now to relieve your editor at door security for a couple of hours and get in free! While you check for receipts, I'll try to sell some advertising space.

I have two tips for you if you go. 1. GET A MAP!!! I suggest a Thomas Brothers or an Auto Club map; but **get one** or you'll end up lost and spaced on those freeways. 2. Bring a cooler to insulate disks from the heat if you plan to buy or bring software. Glendale was hot last year; why take chances?

You'll recall last month I ran the special WordPerfect offer, expiring September 15th. Logical Design Works now offers you the logical supplement, the LDW Power Spreadsheet. LDW offers user groups a discount. ST-Informer reviewed it, found it powerful, fairly bug-free for an early release, and needing 1 megabyte to start. 520 owners, upgrade or pass.

I hope to see and measure a head to head competition between LDW Power and Microsoft Excel, running in Mac mode. Many reviewers consider Excel, not 1-2-3, the spreadsheet standard for power and convenience.

I mentioned Hypercard running under Mac mode; now how about Hyperclone? Beerysbit, A.S.C., Inc has Omnicard, a program resembling Hypercard, under development. It uses the deck of cards metaphor, and it also takes at least 2 megs of memory for best results.

I'd swear I just heard 3 people in El Cajon shout, "Who's gonna be at Glendale?!" Here's the latest list from ACE-NET: Atari, ANALOG, Astra Systems, Best Electronics, Bill Skurski Enterprises, Broderbund, BRE Company, Computer Shop, Comsoft, Data Pacific, Federated, Future-Systems (Indus), Gadgets by Small, ICD/OSS, Index Legalis Publishing, Logical Choice, Megamax, Merrill Ward and Associates, Michtron, Mid-Cities, MIDI Mouse, Migraph, Neocept, Practical Solutions, QMI, Regent Software, Reser Magazine, Seymour -Radix, Softlogik, Sonus Corporation, ST-Informer, ST-Xpress, Supra, Total Control Systems, WordPerfect, and Wuzteck. I hope those 3 people in El Cajon hear this: **S.D.A.C.E. still needs volunteers for the booth.** Call Mike Street at 449-3515.

Atari has a laptop ST under development in England, supposedly with 1 meg's memory and a trackball instead of a mouse. Across the Channel, two French companies plan to sell ST clones here, pending F.C.C. approval. Thanks to the San Leandro Computer Club for those 2 stories and for Omnicard, too.

Now, for you 8-bit owners in S.D.A.C.E. I need some articles; at least some input as to which topics you want to read about. Do you want hardware articles, software articles, game reviews....If you don't inform me (who began with an ST in '86, not a 400 in '81), then you'll get shortchanged. So get up, stand up, stand up for your rights. GET UP, STAND UP

DON'T GIVE UP THE 8-BIT FIGHT! To begin with, you need to pick an interim 8-bit Vice-President. Ron Miller will return to school this fall.

I want to thank Steve Lawrence and Warner Engineering for their new ads. Hopefully The I/O Connector can pay for the printing costs through advertising by the time a new editor takes over. Just how fancy a newsletter you get, however, depends on your input. (And I don't read minds, just BBS's)

Finally, Atari has begun releasing ST ads from its captive breeding program. I saw them in professional musician magazines and in Personal Publishing. Personal Publishing has also begun a 3-part series on Atari and Amiga Desktop Publishing software, favorably comparing Timeworks and Publishing Partner to Ventura and PageMaker, in Part 1.

Atari BBS List

SDACE-BBS	XE/ST	284-3821
COMPUTER PLUS	XE/ST	691-7862
COMPUTER OUTLET	ST	282-6815
COMPUTER BLVD	ST	670-1095 (NEW!)
SMART 520	ST	480-9686
SMART 520	ST	726-4419
THE LORD'S HOUSE	XE	579-7354
SHERWOOD FOREST	XE	273-5603
COMPUTOREDGE	ST	573-1675

Updates and additions welcome!

SpartaDOS X Update

Courtesy ICD and Huntsville A.U.G.

This is a report of the progress of the much anticipated SpartaDOS X.

As of 8/11/88, SpartaDOS X (SDX) is 99% completed. Over the next few days, we will be finishing up the new MENU and tying up a few loose ends. We still have much work to complete on the manual, but we expect to be shipping in September. (Glendale looking better now, 8-bitters?-Ed.) Outside beta testers have been working with SDX for almost 1 month and it has been thoroughly tested in house much longer than that.

SDX includes 64K of the tightest machine code ever written. This is all in our special X cartridge which allows you to plug a language cartridge into the top. SDX has complete over this cartridge allowing it to turn it on and off as desired.

SDX offers the most free memory of any available DOS! APresently MEMLO can be as low as \$0E22 with no handlers

installed in an extended memory machine like the 130XE. 64K machines have MEMLO at \$1201. Of course, handlers push MEMLO up; but MEMLO should still be lower than SpartaDOS 2.3!

High speed data transfer is standard on stock Indus GT drives, Atari XF551 drives, US Doubler enhanced 1050 drives, and Happy 1050 drives. All densities are supported (single, dual, and double), single and double sided drives from 40 to 80 tracks, 3.5", 5.25", and 8".

Hard drives on our Multi I/O are handled with ease. The files per directory limit has been increased to 1424 files. Support has been added for hidden files along with an archive bit for backup.

SpartaDOS X now also supports the old 800 computer! An Axlon compatible RAM upgrade is required for it to be useful, but SDX will actually work in a 48K with BASIC and other

relocatable languages. With an Axlon type RAM board, MEMLO is below \$1000. A 48K stock machine will have a MEMLO just above \$3000.

SDX batch files now support parameter passing. 16 I/O channels are now included! 9 drive support allows D9: as a RAMDISK. Up to 1 meg RAMDISKS are supported if they conform to 'standard' banking methods.

ICD has developed ARC as part of SDX. SDX-ARC is very close to IBM ARC v5.22. SDX-ARC uses many cartridge routines for exceptional speed and will also de-ALF ALFCRUNCH'D files.

Future options for SDX include a Developer's Tool Kit, Database program, and an XEP80 handler if ICD receives enough demand.

ICD, Inc.

1220 Rock Street

Rockford, IL 61101

Attn: SDX

1-815-968-2228

SSL ENTERPRIZES

400/800

16K MEMORY BOARD	\$ 8.00
O S BOARD	8.00
CPU BOARD < OLD >	8.00
< NEW >	10.00

ICs

810/1050 PIA, 800/XL/XE PIA,	
Pokey, GTIA, 6507, 810 OS	\$ 5.00
800 ANTIC	5.00
XL/XE ANTIC, 1050 OS	10.00

MISC

130 XE keyboard mylar	\$ 20.00
600XL 64K upgrade	29.00
800XL 256K upgrade PCB no ICs	15.00

ATARI 8-BIT PARTS

810

SIDE BOARD	\$ 15.00
DATA SEPARATOR	8.00
SIDE + O S	20.00
ANALOG BOARD	8.00
REAR BOARD	8.00
SET OF ALL 4	32.00

STEVE LAWRENCE

745-2044

RS232C to TTL TRANSLATOR CIRCUIT

Here it is, the RS232 interface that I promised a couple of club members several months ago! The circuit in Figure C is all it takes. The MAX232 chip is extremely easy to implement because it requires only a single +5 volt supply for complete operation. The chip is available at Jameco Electronics (Ph# (415) 592-8097) for approximately \$5.00, but they do have a \$20.00 minimum-order policy so you might pick up some other goodies when you go to order. You can also get data sheets for any device they sell (I think!) for about 50 cents.

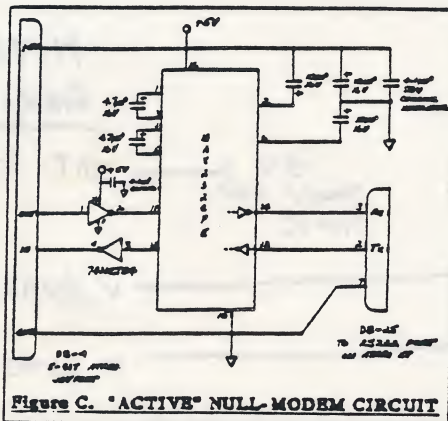


Figure C. "ACTIVE" NULL-MODEM CIRCUIT

I became involved with this RS232 interface stuff when a couple of club members called concerning problems they had with the two Null-Modem circuits that were published in the PSAN Newsletter within about the last year or so...! These articles showed how to connect the 8-bit Atari joyport to the ST's RS232 port (Figure D) to enable file transfers between the two computers using some kind of terminal software with which I have absolutely no experience. The latter of the two articles looked like a copy of the original (but by a different author) and if so, had a mistake in the wire connections. When I say that the circuits in question were inadequately designed, I don't mean to offend or belittle the authors of these articles. I personally think the Atari community owes a great deal of thanks to them since they both contribute to several Newsletters on a regular basis. However, this case is a

matter of 'Life and Death' to the 8-bit Atari's PIA chip. Heck, what's life without a little drama?

The problem, with respect to the circuit in Figure D, is that RS232 signal levels are simply incompatible with TTL logic IC's. RS232 signal levels may range from +/- 3 to 25 volts and these signal levels must be limited or clamped to voltage levels within the specified input voltage range of the particular TTL logic family concerned. For most IC's the limits are tenths of volts above Vcc and below ground. There are a few specially designed chips that allow you to break the rules, however, your PIA chip is not one of them! Internally, TTL logic chips have protection diodes and isolation layers, which, when forward biased, cause several internal circuit elements to be short-circuited thus destroying the integrity of the circuit. Some logic families have a parasitic-latch structure which, when activated by excessive input voltages, attempts to short Vcc to Ground (Got some weenies and a stick ... ?). The amount of damage done to any particular IC will depend on the characteristics of the logic family, the actual physical layout of the internal components and substrates, and the magnitude of the over/under voltage and current in violation of the input limits. Similarly, TTL IC outputs are susceptible to the same damage and for the same reasons.

The circuit in Figure D is inappropriate on 3 counts. First, TTL outputs should not be used to drive RS232 inputs directly; second, the RS232 to TTL connection doesn't sufficiently limit negative voltage inputs (standard signal diodes forward voltage rating is too high ... use 1N5711's); third, the positive overvoltage is not clamped or limited externally. The internals of the IC will determine the + clamp voltage and the external resistor will only provide current limiting, which is probably what saved your PIA. Now obviously this simple circuit worked for some people, right? Otherwise, it wouldn't have appeared in our Newsletters! Well, fortunately, IC's don't always go 'poof' immediately. Some are very durable and under-rated and will last quite a while before degrading to the point of permanent failure. If you have built and used the simple circuit in Figure D and intend to continue swapping files between computers, then now is the time to build the Active Null-Modem circuit in Figure C. That's right ... "If it works, fix it!" Think of it as an inexpensive insurance policy! Believe me, if RS-232 interface manufacturers could get away with using the circuit in Figure D they would, simply because it's so much cheaper to manufacture.

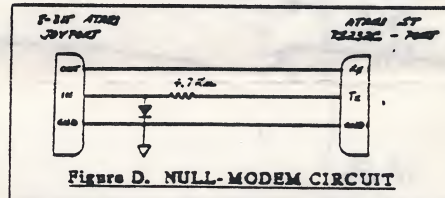
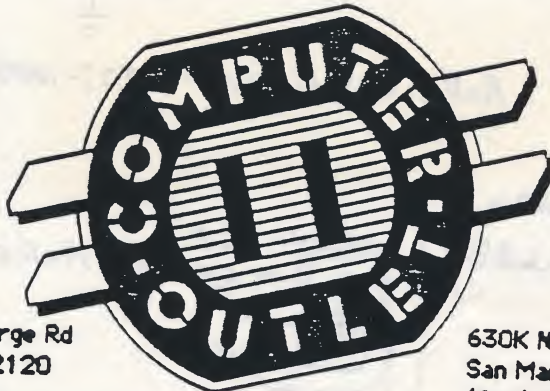


Figure D. NULL-MODEM CIRCUIT

CAUTION

COMPUTER OUTLET MAY BE HABIT FORMING



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San Diego, CA 92120
(619) 282-6200

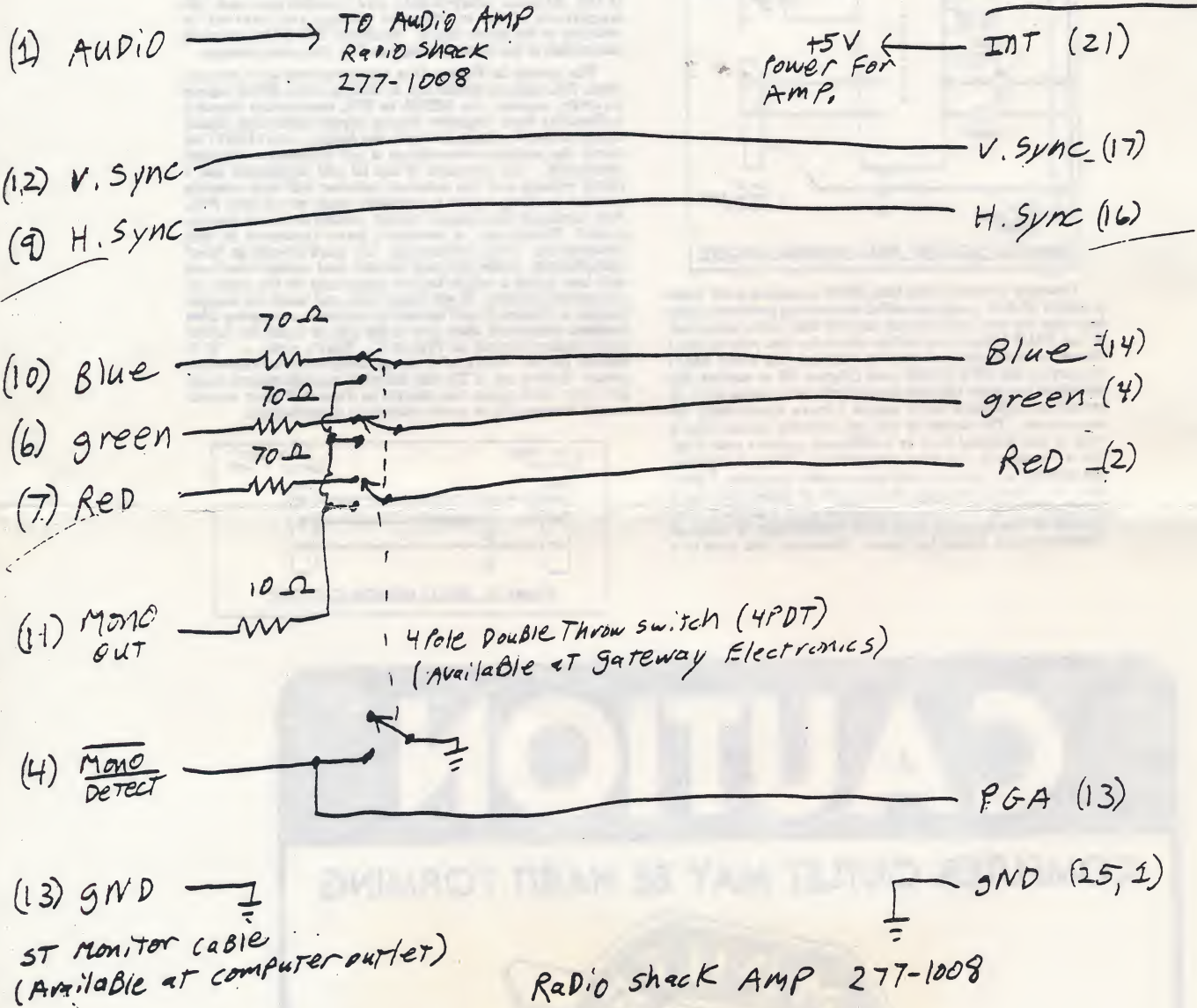
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(619) 740-0111

6% off all non-sale software and hardware on your next purchase.

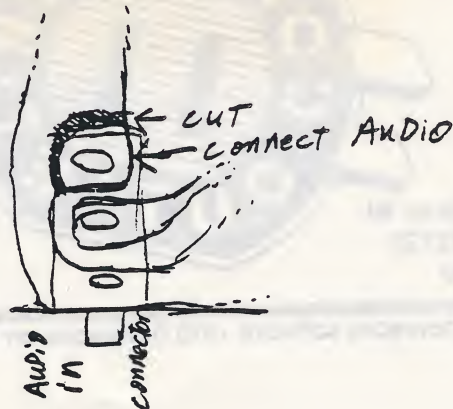
Color & Black/white Monitor conversion For Mitsubishi AUM-1371A TO ST

Atari ST

Mitsubishi
AUM-1371A



Inserting Audio
plug will Disable
ST Audio



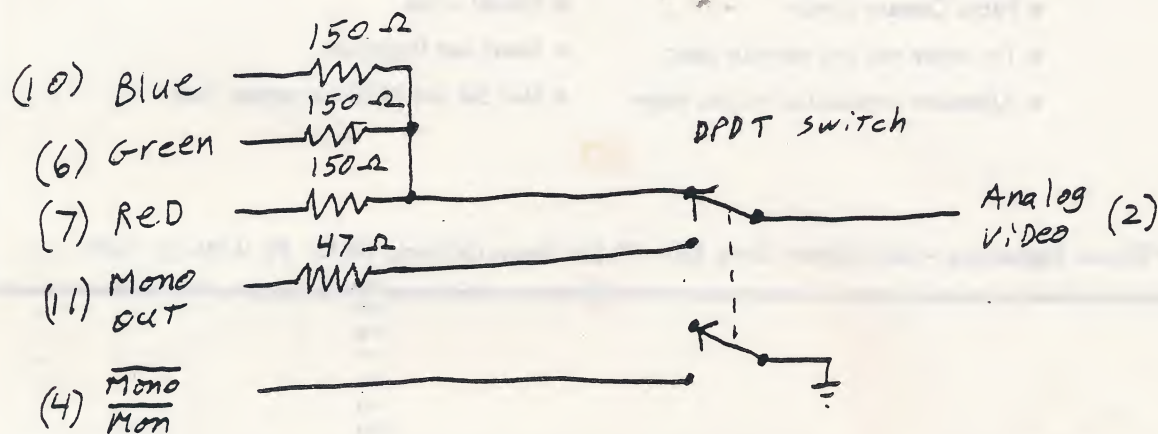
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NEC Multisync G-5 TO ATARI ST conversion

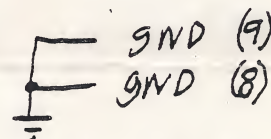
ATARI ST

NEC Multisync G-5

(12) V.Sync ————— V.Sync (5)
(9) H.Sync ————— H.Sync (4)



(13) GND ————



(1) Audio ———→ TO Audio AMP

ST Monitor cable
(Available at computer outlet)

NOTE: Multisync G-5 is a B/W Monitor. In color mode, colors are converted to shades of Gray.

Warning: In B/W Mode, The scan Frequency if above the Maximum Rated By the Manufacturer. This will void the Warranty, However it appears to function correctly.

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Warner's

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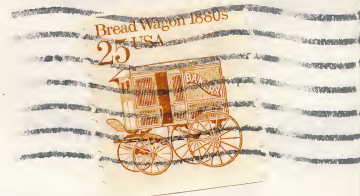


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P.O. BOX 203076
SAN DIEGO, CA 92120



EXP: JUL 89

SAN DIEGO, CA 92126

THE October 8-BIT meeting will be held on October 13th at the Rec Center, 10540 Caminito Baywood, in Mira Mesa at 7:00 pm. The **ST beginners/hands-on workshop** will be held at North Park Rec Center (Across from Folsom's Racquetball Court) **October 6th** at 6:30 p.m. The **regular ST meeting** occurs on **October 17th** at the North Park Rec Center, Social Room facility, at 6:30 p.m.